



25/36

	10	20	30	40	50	60
Tth	MR	LLFR	RNF	RNL	AL	EAYRPPPGT
Eco	MS	LR	LR	LR	LR	LR
Ppu	MY	LR	LR	LR	LR	LR
Bsu	MY	LR	LR	LR	LR	LR
Mtu	MY	LR	LR	LR	LR	LR
Dra	MY	LR	LR	LR	LR	LR
	70	80	90	100	110	120
Tth	AD	LR	LR	LR	LR	LR
Eco	GR	VR	HE	QEA	FV	LHGR
Ppu	NP	VI	QEA	FV	LHGR	LR
Bsu	KEL	IR	WD	KDY	AK	IEGR
Mtu	LPL	IR	WD	KDY	AK	IEGR
Dra	EQ	LI	QAG	TE	AY	VR
	130	140	150	160	170	180
Tth	VS	PL	DT	EA	VL	GPKE
Eco	LI	TP	EG	FT	LL	NGGP
Ppu	ER	TL	SEL	VE	LD	GP
Bsu	MF	AP	DL	NL	VK	GS
Mtu	LF	AP	DL	NL	VK	GS
Dra	WI	RP	DS	EL	VFG	PP
	190	200	210	220	230	240
Tth	---	EG	LS	AW	DR	EL
Eco	---	EQ	LR	PD	WK	EL
Ppu	---	EQ	LR	PD	WK	EL
Bsu	R---	TM	CD	VL	TD	QV
Mtu	DR	GV	FD	TL	DL	WS
Dra	---	WAM	HV	WD	VL	LK
	250	260	270	280	290	300
Tth	LE	ET	AGE	G	VL	RA
Eco	KE	---	TE	---	YAE	VL
Ppu	KD	---	RE	---	LQE	VL
Bsu	VS	DP	LD	LS	KIG	DS
Mtu	VT	GP	SE	QS	DI	DR
Dra	LT	TES	---	TS	PE	TY
	310	320	330	340	350	360
Tth	GE	AK	TL	AL	RL	AE
Eco	GQ	IK	KL	LM	CA	RL
Ppu	GQ	IK	KL	LM	CA	RL
Bsu	GO	QR	TT	AL	SL	KL
Mtu	GE	AK	TL	AL	RL	AE
Dra	GE	AK	TL	AL	RL	AE
	370	380	390	393	397	399
Tth	EAP	PG	VP	CV	SV	RG
Eco	ISA	EH	VI	DM	SD	EN
Ppu	ISA	EH	VI	DM	SD	EN
Bsu	TS	VD	GT	TH	ET	LR
Mtu	AV	LE	DI	PA	GW	DA
Dra	EL	AP	GA	AL	TL	RA

Tth: Thermus thermophilus HB8  
Eco: Escherichia coli  
Ppu: Pseudomonas putida  
Bsu: Bacillus subtilis  
Mtu: Mycobacterium tuberculosis  
Dra: Deinococcus radiodurans

FIG. 27

**13/36**

Motif I			
RecJ_Tt	[73]	KRIRVHGDDADGLTGTAILLVRGLAALG	[100]
RecJ_Ec	[73]	TRIIIVGDFDADGATSTALSVLAMRSLG	[100]
RecJ_Aa	[78]	KRIIIYGDDVDGITGTAILYRVLKLLG	[105]
RecJ_Hp	[47]	TEILVVGDDADGVISSAIIAKFFESLN	[74]
RecJ_Hi	[68]	QKIVIVGDFDADGATSTALSVLALRQLG	[95]
PPX1_Sc	[30]	TICVGNESADMDSTIASAIIISYCQYIYN	[57]
PRUNE_Dm	[38]	HLVMGNESCDLDSAVSAITLAFVYAASS	[65]
Motif II		Motif III	
RecJ_Tt	[129]	SDLFLITVDCCGITNHAELRE	[147]
RecJ_Ec	[131]	AQLIVITVDNGISSHAGVEH	[149]
RecJ_Aa	[133]	GDFLIITVDNGTSAVEEIDQ	[151]
RecJ_Hp	[102]	APLIITVDNGINAFEAARF	[120]
RecJ_Hi	[126]	VQLLMTVDNGVSSFDGVAF	[144]
PPX1_Sc	[120]	ELNSYLVNDNDTPKNLKNY	[138]
PRUNE_Dm	[88]	PLVCEMWDRCARVALPRRY	[106]
Motif IV		Specific Motif	
RecJ_Tt	[210]	YADLAAGVTIADVAPLWGW	[228]
RecJ_Ec	[226]	LLDLVALGTIADVVPIDAN	[244]
RecJ_Aa	[215]	FLDLVALGLLADYMPVNPV	[233]
RecJ_Hp	[189]	LLCLAGVATIADMPLTFF	[207]
RecJ_Hi	[219]	LLDLVALGTIADVVPIDQN	[237]
PPX1_Sc	[191]	IALLLMGATLIDTSNMRRK	[209]
PRUNE_Dm	[183]	VAQLLHATIVLDTINFAPA	[201]

Tt : Thermus thermophilus HB8, Ec : Escherichia coli, Aa : Aquifex aeolicus.

Hp : Helicobacter pylori, Hi : Haemophilus influenzae Rd.

Sc : Saccharomyces cerevisiae, Dm : Drosophila melanogaster

**FIG. 14**